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(54)**BUILD-UP WELDING METHOD**

(57)Abstract:

PURPOSE: To enable the adjustment of a thickness in the width direction of a build-up welding layer by slantingly oscillating a high energy heat source to the longitudinal direction at the time of executing the build-up welding in the longitudinal direction by the irradiation of the high energy heat source while supplying the build-up welding material on a base material.

CONSTITUTION: A laser beam L is condensed with a convex lens 3 and irradiates a valve seat part 2 around the port 1a of a cylinder head 1 through an oscillating mirror 4. The valve seat part 2 is horizontally rotated with a rotary table and the build-up welding material M is supplied to this treating surface from a build-up welding material supplying device 6, and shield gas is supplied from a shield gas supplying device 7 to execute the build-up welding in the longitudinal direction. At this time, the laser beam L irradiates slantingly to the treating surface and oscillates with a fixed

width in a prescribed direction by a galvano-motor 5. By this method, the time lag is generated at the irradiating time of the laser beam L in the width direction of the working build-up welding layer, and the thickness in the width direction of the build-up welding layer can be adjusted.

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